

Benson, Bob

From: Benson, Bob
Sent: Friday, January 17, 2014 10:26 AM
To: james.lockey@uc.edu
Cc: hilbertj@ucmail.uc.edu
Subject: Personal Communications

As part of the Libby Amphibole IRIS assessment, I have been asked to get confirmation of personal communications from you and your research group related to your studies of the Marysville workers. These personal communications are included below. Please provide a return email confirming these personal communications.

Lockey et al. (1984) reported the maximum value for this group as 39.9 fibers/cc-years, but this estimate was later corrected to exclude work from 1947 to 1956, prior to the use of vermiculite at the plant. Information provided in personal communication from J. Lockey to Robert Benson, U.S. EPA, June 7, 2011.

Exposure was estimated using the procedure previously described (Lockey et al., 1984). Exposure was assumed to occur from 1963 to 1980 in this study, assuming an 8-hour workday and 365 days of exposure per year. (J. Lockey, University of Cincinnati, personal communication to R. Benson, U.S. EPA July, 2007). [The exposure referred to here is in Rohs et al., 2008.]

Table 4-9. Prevalence of pleural pathological alterations according to quartiles of cumulative fiber exposure in 280 participants

Exposure quartile	Exposure range, fiber-yr/cc, (mean)	Number of workers	Number of workers with pleural thickening (%) ^b	Crude OR (95% CI)	Age-adjusted OR (95% CI)	BMI-adjusted OR (95% CI)	Number of workers with small opacities (%)
First	0.01–0.28 (0.12)	70	5 (7.1)	1.0 (referent)	1.0 (referent)	1.0 (referent)	0 (0)
Second	0.29–0.85 (0.56)	72 ^a	17 (24.6)	4.0 (1.4–11.6)	3.2 (1.0–9.7)	4.9 (1.3–18.2)	0 (0)
Third	0.86–2.20 (1.33)	68 ^a	20 ^c (29.4)	5.4 (1.9–15.5)	4.0 (1.3–12.8)	7.6 (2.1–27.5)	1 (1.5)
Fourth	2.21–19.03 (7.93)	70	38 (54.3)	15.4 (5.6–43)	10.0 (3.1–32)	17.0 (4.8–60.4)	7 (10)
Total	(2.48)	280	80 (28.6)				8 (2.9)

^aTwo observations in the second quartile and two in the third quartile had exact exposure values at the 50th percentile cutoff point. Rounding put these four observations in the second quartile.

^bStatistically significant trend across exposure groups, $p < 0.001$.

^cTypographical error in publication corrected.

Source: Rohs et al. (2008), Table 3 and Figure 2; mean exposure levels and number of workers with parenchymal abnormalities by quartile obtained from J. Lockety, University of Cincinnati (personal communication to Robert Benson, U.S. EPA).